

APPLICANT(S): GLUKHOVSKY, Arkady et al.  
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### AMENDMENTS TO THE CLAIMS

Please amend the following claims.

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Withdrawn) An in vivo device comprising:  
a light detecting sensor;  
a non-image sensor; and  
an illumination source;  
wherein said non-image sensor is connected with said illumination source.
2. (Withdrawn) The in vivo device according to claim 1 wherein the light detecting sensor is an image sensor.
3. (Withdrawn) The in vivo device according to claim 2 wherein the image sensor is selected from a group including: a CMOS, and a CCD.
4. (Withdrawn) The in vivo device according to claim 1 wherein the non-image sensor is selected from a group including: temperature sensor, pH sensor, pressure sensor, location sensor, blood detection sensor, and control detector.
5. (Withdrawn) The in vivo device according to claim 4 wherein the control detector is selected from a group including: a battery level detector, a signal strength detector, and an operational mode detector.
6. (Withdrawn) The in vivo device according to claim 1 wherein the non-image sensor is to relay non-image sensor information selected from a group including: analog information, digital information.
7. (Withdrawn) The in vivo device according to claim 6 wherein the non-image sensor information is relayed to said illumination source.
8. (Withdrawn) The in vivo device according to claim 7 wherein the non-image sensor information is converted to information selected from a

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group including: light amplitude, light frequency, light pulse amplitude, light pulse width, and light pulse frequency.

9. (Withdrawn) The in vivo device according to claim 6, wherein the digital information is conveyed to the illumination source as a bit pattern.
10. (Withdrawn) The in vivo device according to claim 1 wherein the illumination source is a LED.
11. (Withdrawn) The in vivo device according to claim 1 comprising an illumination device driver circuit.
12. (Withdrawn) The in vivo device according to claim 1 comprising an optical guide.
13. (Withdrawn) The in vivo device according to claim 12 wherein an optical guide is selected from a group including: an one optical fiber, a plastic a conduit, a prism, and a mirror.
14. (Withdrawn) The in vivo device according to claim 13 wherein the optical guide is to direct light from the illumination source to a specified area in the light detecting sensor.
15. (Withdrawn) The in vivo device according to claim 14 wherein the specified area in the image sensor is an area not designated for capturing image information.
16. (Withdrawn) The in vivo device according to claim 1 wherein the non-image sensor is sampled at a different rate than the light detecting sensor.
17. (Withdrawn) The in vivo device according to claim 2 wherein the image sensor is to sample image information and non-image sensor information in alternate frames.
18. (Withdrawn) The in vivo device according to claim 1 comprising a power source.
19. (Withdrawn) The in vivo device according to claim 1 comprising a switch to convey non-image sensor information to an illumination source.

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20. (Withdrawn) The in vivo device according to claim 1 comprising:  
an image sensor; and  
a light detecting sensor.
21. (Withdrawn) The in vivo device according to claim 20 wherein the  
image sensor is configured for sampling image information and the  
light detecting sensor is configured for sampling non-image sensor  
information.
22. (Withdrawn) The in vivo device according to claim 21 wherein an  
output from the non-image sensor triggers activation of the image  
sensor.
23. (Withdrawn) The in vivo device according to claim 21 wherein an  
event captured by the image sensor triggers activation of the light  
detecting sensor.
24. (Withdrawn) The in vivo device according to claim 1 comprising a  
processing chip.
25. (Withdrawn) The in vivo device according to claim 1 comprising a  
compression module.
26. (Withdrawn) The in vivo device according to claim 1 comprising a  
memory module.
27. (Withdrawn) The in vivo device according to claim 1 comprising a  
transmitter.
28. (Withdrawn) The in vivo device according to claim 1 wherein the in  
vivo device is configured for sensing the gastrointestinal tract.
29. (Withdrawn) The in vivo device according to claim 1 wherein the in  
vivo device is a capsule.
30. (Withdrawn) An in vivo imaging system comprising:  
an in vivo transmitting device comprising an image sensor, a non-  
image sensor; an illumination source; and a transmitter,  
wherein said non-image sensor is connected with said illumination  
source;

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an external receiver; and  
a display.

31. (Withdrawn) The in vivo imaging system according to claim 30 wherein the in vivo transmitting device is a capsule.
32. (Withdrawn) The in vivo imaging system according to claim 30 wherein the display is to display non-image sensor information.
33. (Withdrawn) The in vivo imaging system according to claim 30 wherein the non-image sensor information is displayed as a lit area on the monitor outside the image, a graphical icon, a numerical value, or a graph of non-image information over time.
34. (Cancelled)
35. (Previously Presented) A method according to claim 44 comprising: displaying image sensor information.
36. (Previously Presented) The method according to claim 44 wherein the non-image sensor information is obtained from the gastrointestinal tract.
37. (Previously Presented) The method according to claim 44 comprising: directing the non-image sensor information to a specified location on the image sensor via an optical guide.
38. (Currently Amended) The method according to claim 44 wherein ~~converting~~ relaying the non-image sensor information to the output of an illumination source is by electrically connecting the illumination source to the non-image sensor.
39. (Previously Presented) The method according to claim 44 comprising the step of interpreting the non-image information obtained.
40. (Previously Presented) The method according to claim 39 comprising the step of displaying the interpreted non-image sensor information.
41. (Cancelled)
42. (Cancelled)
43. (Cancelled)

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44. (Currently Amended) A method for transmitting in vivo non-image information, the method comprising:  
obtaining non-image sensor information from a sensor;  
~~converting~~ relaying the non-image sensor information ~~to~~ for  
modulating either the frequency of the optical output or the amplitude  
for brightening or dimming the optical output of an illumination source, the illumination source contained within a container;  
relaying the output of the illumination source to an area on an image sensor, the image sensor contained within the container; and  
transmitting the image sensor information to an external receiver.
45. (Currently Amended) An in vivo imaging system comprising:  
a non-image sensor to obtain non-image information;  
a container enclosing:  
an illumination source;  
an illumination driver circuit ~~to convert~~ for relaying the non-image sensor information ~~to~~ for modulating either the frequency of the optical output or the amplitude for brightening or dimming the optical output of the illumination source; and  
an imager to image at least the output of the illumination source.
46. (Currently Amended) The in vivo system of claim 45 comprising a display to display the relayed non-image sensor information.
47. (Currently Amended) The in vivo system according to claim 45 comprising a processor to process the relayed non-image sensor information imaged by the imager.